

REMARKS

Reconsideration and allowance of pending claims 1-22, 28 and 29 are requested based on overcoming the rejections and objection in the response, as follows;

I. STATUS OF THE CLAIMS:

1. Claims 1, 14 and 19 are objected to because of informalities.
2. Claims 1, 8, 9, 14, 17 and 28 are rejected under 35 USC 112, first paragraph as ambiguous or the specification fails to support claimed terminology.
3. Claims 14 and 15 are rejected under 35 USC 112, second paragraph for insufficient antecedent in the claims for the limitation “the second higher data rate”
4. Claims 1-5, 10-21, 28 and 29 are rejected under 35 USC 103 (a) as being unpatentable over USP 7,046,716 to G. J. Miao, issued May 16, 2006, filed July 4, 2003 (Hereafter Miao) in view of USPAP 20020164997 to T. Parry, published November 7, 2002, filed May 7, 2001 (Hereafter Parry).
5. Claim 22 is rejected under 35 USC 103(a) as being unpatentable over Miao in view of Parry and in further view of USP 7, 135,985 to D. J. Woolgar et a, issued November 14, 2006, filed March 21, 2003 (Hereafter Woolgar).

Applicants have amended the claims to overcome the objections and rejections; distinguished the claims from the cited art and supported the patentability of New Claim 30.

Applicants respond to the indicated Paragraphs of the subject Office Action, as follows:

II. RESPONSE TO THE CLAIM OBJECTIONS:

- (i) Claim 1 has been amended to delete the phrase “Dear Tommy” erroneously included in claim 1, line 5.

(ii) Claim 14 has been amended to replace the term “significantly faster” in line 4 with “higher data rate”, which also serves as an antecedent for the corresponding term in claim 14, line 5.

(iii) The term “wireless” has been inserted in claim 19, line 7 after the term “the.”

The amendment of claims 1,14 and 19 overcomes the objection. Entry of the amendments and withdrawal of the objections are requested.

III. RESPONSE TO THE CLAIM REJECTIONS – 35 USC, FIRST PARAGRAPH:

(i) Claims 1, 14, and 28 have been amended to compare the second higher data rate link with a first low power, low data rate link.

(ii) The term “heavy error coding” is described in applicants’ specification at page 15, lines 12-16 as “linear block codes, such as single-error correcting/error detecting codes described in an article entitled, “Applications of Error-Control Coding”, by DJ Costello, Jr., et al., published in the IEEE Transactions of Information Theory, October 1998, pgs. 2531- 2560”.

(iii) The term “simple error checking” has been changed to “simple parity checking” as described in applicants’ specification at page 6, lines 1-3 and page 14, lines 11-15

(iv) The term “time consuming adjustments” is described in applicants’ specification at page 16, lines 16-19 and at page 6, lines 19-21.

Applicants’ amendment to the claims and explanation of the specification terms overcome the rejection and are believed sufficient to enable a worker skilled in the art to implement the claimed subject matter. Accordingly, withdrawal of the rejection of claims 1, 8, 9, 14, 17 and 28 under 35 USC 112, first paragraph is requested.

IV RESPONSE TO THE CLAIM REJECTIONS – 35 USC 112, SECOND PARAGRAPH:

(i) Claim 1, line 4 has been amended to describe “a second higher data rate” to serve as an antecedent for corresponding terms subsequently included in claims 14 and 15. The

amendment of claim 14 overcomes the rejection under 35 USC 112, second paragraph.

Withdrawal of the rejection of claims 14 and 15 is requested.

V. RESPONSE TO THE CLAIM REJECTIONS – 35 USC 103(A):

Before responding to the rejections, applicants would like to distinguish Miao and Parry, alone or in combination, from the claimed subject matter, as follows:

1. Miao discloses a dual-mode transmitter of an indoor and/or outdoor UWB and WLAN 802.11a communication transceiver. The transmitter system of the dual-mode UWB and WLAN 802.11a is able to transmit either in a UWB mode for indoor or outdoor signals with a very-high data rate in the range of 3-10 meters or a WLAN 802.11a mode with signals at lower data rate in a longer range up to 100 meters.

During the UWB mode, the UWB transmitter receives user data bits. The bit data is then interleaved by using a block interleaver. A switch under a software control unit forms output bits into 11 multichannels. Then chip data of each channel is sequentially passed through an outdoor digital low pass shaping finite impulse response (FIR) filter system to limit the frequency bandwidth. The output chip data of each channel from a D/A converter is then modulated with a multi-carrier by using a multichannel-based multi-carrier with controlling from the software control unit. The output analog signals of the multichannel-based multi-carrier are passed via a power amplifier (PA) 226 and an antenna into air.

During the WLAN 802.11a mode, the WLAN 802.11a transmitter 200 receives user data bits 210 and interleaved using an interleaver unit. The output bits of the interleaver unit are formed in parallel to be used for a 64-point inverse fast Fourier transform (IFFT). The output of the 64-point IFFT is performed for an image/quadrature (I/Q) modulation. Then output data of the I/Q modulation is passed through a digital low pass shaping FIR filter system to limit the frequency bandwidth with 20 MHz for the channel signal. The channel signal is passed through a D/A converter. The output from the D/A converter is modulated with a multi-carrier by using a multichannel-based multi-carrier controlled by a software control unit. The output

analog signals of the multichannel-based multi-carrier are passed via the power amplifier through an antenna into air.

Maio fails to disclose the claimed subject matter, as follows:

- (i) A low power, low data rate communication channel for transmitting and receiving data and providing link manager protocol controlling a second higher data rate communication channel transmitting and receiving data only, as described in applicants' specification at page 8, lines 15-21.
- (ii) a UWB channel free of link manager protocol for establishing a connection, as described in applicants' specification at page 16, lines 12-16.
- (iii) a removable memory module attached to a terminal, the memory including a UWB transmitter/receiver and integrated memories, as described in applicants' specification at page 16, lines 11-16.
- (iv) a UWB transceiver for capturing data at high data rate and transferring the captured data to a utilization device at a lower data rate, as described in applicants' specification at page 16 lines 7-10

2. Parry discloses a wireless communication access control system comprising first computing device and a second computing device. The first and second computing device each include a controller and a wireless communication transceiver for communicating with each other. The first computing device is configured for controlling an access zone adjacent the first computing device for permitting selective wireless communication access to the first computing device for the second computing device based on a position of the second computing device relative to the access zone. The first computing device serves as a gateway for controlled wireless access by the second computing device to the first computing device, a network of computing devices, a computer system and a network communication link.

- (i) In Parry, the selective control of communications exercised by the first computing device for the second computer system is based on the position of a second

computing device relative to an access zone. In contrast, applicants disclose a first low power communication unit controlling a UWB unit based on link manager control protocol with a second low power communication unit linked to the UWB unit, as described in applicants' specification at page 5, lines 17-22. Parry teaches a first computing device controlling a second computing device for access to the first computing device based on location with respect to an access zone and not link manager control protocol as taught by applicants.

3. Woolgar discloses a home electronics system incorporating a command system using various low power communication protocols Bluetooth, ZigBee, Home RF, WiFi, IEEE802.11, HiperLAN).

(i) There is no disclosure or suggestion in Woolgar of using low power communication protocols in a WLAN/UWB communication system.

Now turning to the rejections, applicants respond, as follows;

4. Claims 1-5, 10-21, 28 and 29 include features not disclosed in Miao and Parry and overcome the rejection under 35 USC 103 (a), as follows:

4.1 Claims 1, 14 and 28

The Examiner acknowledges that Miao does not disclose the single control feature in elements a) and b) of claims 1, 14 and 28. However the Examiner contends that (1) Parry in Paragraphs 8 and 29 discloses selective control of any communication link between two devices, and (2) the incorporation of Parry into Miao for purposes of a single link controlling another link would be obvious to a worker skilled in the art. Applicants disagree.

The incorporation of Parry into Miao provides control of the second link based on the physical position of the second link with respect to an access zone. There is no teaching in Miao and Parry, alone or in combination, transmitting link control data on one link for controlling data on a second link. Stated another way, controlling transmission on a link by physical position of the link does not teach or suggest controlling transmission on the link via control data transmitted on another link.

The rejection of claims 1, 14 and 28 is without support in the cited art. Withdrawal of the rejection under 35 USC 103 (a) and allowance of claims 1, 14 and 28 are requested.

4.2 Claims 3, 10 and 19

The Examiner contends that the dual mode UWB and WLAN transceiver 100 of Miao shown in Figures 1 and 6 (a single device) describes applicants' stationary device 102 and mobile device 104 (two devices) shown in Figure 1 of applicants' drawings and recited in claims 3, 10 and 19. Applicants can find no disclosure in Miao relating to two devices communicating via two transmission paths wherein one device is mobile, as described in applicants' specification at page 4, line 17 to page 6, line 5.

The Examiner acknowledges that Miao does not disclose a removable memory 106 shown in applicants' Figure 1. However, the Examiner contends that Parry in Paragraphs 20 and 42 discloses a removable memory and exchanging of UWB parameters between devices via the low power communication link. Paragraph 20 describes the components of the wireless control system. Various memory devices are identified. Paragraph 42 discloses a user interface for wireless access determination. However, none of the memories are described as removable, integrated and including a UWB transmitter.

Applicants submit that Miao and Parry, alone or in combination, fail to disclose or suggest (1) two wireless devices, one stationary and the other mobile, each including a low data rate and a high data rate transceiver, (2) exchanging control parameters between the stationary and mobile devices via a low power connection freeing the high data rate transceiver from link control overhead, and (3) a removable, integrated memory including a high data rate transmitter in a mobile device for communication with a base device.

The rejection of claims 3, 10 and 19 is without support in the cited art for the reasons indicated above. Withdrawal of the rejection under 35 USC 103 (a) and allowance of claims 3, 10 and 19 are requested

4.3 Claims 2 and 29

Miao at column 5, lines 1-20 discloses a dual mode UWB/WLAN transceiver, wherein the UWB transmission mode does not depend on information communicated in the WLAN mode. Claims 2 and 29 describe otherwise.

The rejection of claims 2 and 29 is without support in the cited art. In any event, Claims 2 and 29 depend from and further limit independent claims 1 and 28, respectively and are patentable over the cited art on the same basis as the claim from which they depend.

4.4 Claim 4

Applicants have demonstrated in claim 3 that Parry does not include a removable memory including integrated memories. Applicants can find no disclosure in Parry at Paragraphs 20 and 42 for storing and transmitting UWB data in a base device for processing in a mobile device. In any event, claim 4 depends from and further limits claim 3 and is patentable over the cited art on the same basis as claim 3.

4.5 Claims 5 and 16

Claims 5 and 16 depend from and further limit claims 3 and 14, respectively and are patentable over the cited art on the same basis as the claim from which they depend.

4.6 Claims 11, 12, and 13

Claims 11, 12 and 13 depend directly or indirectly from and further limit claim 10 and are patentable over the cited art on the same basis as claim 10.

4.7 Claims 15, 17 and 18

Claims 15, 17 and 18 depend directly or indirectly from and further limit claim 14 and are patentable over the cited art on the same basis as claim 14

4.8 Claims 20, 21 and 22

Claims 20, 21 and 22 depend directly from and further limit claim 19 and are patentable over the cited art on the same basis as claim 19

V. Patentable Support for New Claim 30

Claim 30 is distinguishable from and patentable over Miao, Parry and Woolgar by the failure of the cited art, alone or in combination to disclose or suggest:

(1) a first wireless communication link with another including control information; (2) a second wireless link with the another device as a direct channel, and (3) using the first communication link as a control channel for the second wireless link device freeing the second wireless communication link device from link control over head for direct data transmission

CONCLUSION

Applicants have amended the claims to overcome the objections and rejections; distinguished and supported the patentability of New Claim 30, and distinguished the claims from the cited art. Entry of the amendment, allowance of the claims and passage to issue of the application are requested.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4500, Order No. 4208-4146.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No 13-4500, Order No. 4208-4146.

Respectfully submitted,

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